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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,628	04/12/2004	Gerhard Spitz	LBP-PT038	3298
3624	7590	01/04/2006	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			BEVERIDGE, RACHEL E	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,628

Applicant(s)

SPITZ, GERHARD

Examiner

Rachel E. Beveridge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/9/04 & 10/14/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-10, drawn to a method for producing a closed metal profile or metal tube, classified in class 228, subclass 173.6.
- II. Claims 11-20, drawn to a roll-forming system, classified in class 29, subclass various.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the roll-forming system can be used to produce a corrugated structure that is not closed.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Dimitri Dovas on October 14, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 4,603,806) in view of Ruple (US 5,720,195).

With respect to claim 1, Watanabe discloses a method of manufacturing metal pipe with longitudinally differentiated wall thickness by bending and welding with high dimensional accuracy (Watanabe et al., col. 1, lines 45-52). Watanabe also discloses roll bending the sheet metal to form tubes as shown in figure 14 (col. 6, lines 43-47). Regarding claims 2 and 3, Watanabe's figure 10 shows a pair of presses (22) (which can also be forming rolls or other appropriate tools (col. 5, lines 54-59)) perpendicular to the plane of the weld axis at the centerline (20, 21) between the edges of the sheet metal strip (2,3). With regard to claim 4, figures 6,9, and 10 of Watanabe show sections of a metal strip (2,3) with different thicknesses where the center of each section on each longitudinal edge of the strip are aligned before welding. Further regarding claim 1, Ruple discloses a process for producing seam-welded tubes via a series of forming rolls that progressively deform into a tube with an open longitudinally extending seam (Ruple, col. 1, lines 12-17). Ruple discloses that the specific contour of the forming rolls is a function of the width and thickness of the strip being formed and

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the size of the tube being formed (col. 2, lines 28-33). Ruple's field of invention is a mill for the manufacture of continuous seam-welded tubes or pipes of particular sizes and shapes (col. 1, lines 5-11). Ruple also discloses the longitudinal edges of the tube are urged together during welding (col. 1, lines 18-20). With respect to claim 5, Ruple discloses adjacent roll stands including at least a pair of cooperating forming tools of different contour than rolls (16, 18), thus effecting the gradual deformation of the flat metal strip into a tube (col. 2, lines 25-28). Also, Ruple discloses the specific contour of the forming rolls are a function of the width and thickness of the strip being formed, the metal alloy of the strip, and the size of the tube being formed (col. 2, lines 28-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tube manufacturing method of Watanabe to include the sizing and welding processes of Ruple in order to reduce the amount of time spent welding tubes of varying thickness (Ruple, col. 2, lines 54-65).

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 4,603,806) and Ruple (US 5,720,195) as applied to claim 5 above, and further in view of Foster (US 4,047,411).

With respect to claims 6 and 8, Ruple discloses reciprocal vertical movement achieved by a lead screw and drive mechanism that is simultaneously driven by a motor coupled to the interconnected drive shaft (Ruple, col. 3, lines 24-27). However, Watanabe and Ruple lack disclosure of a sensor for continuous measurement and control of the distance between forming rolls. Foster discloses a hydraulic actuator that controls the position of the upper

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forming roll (Foster, col. 2, lines 59-61). Regarding claim 7, the examiner interpreted the claim to read, "tool is pre-tensioned or set pneumatically or hydraulically." Foster discloses a position sensor that continuously sense the position of the upper roll and controls a feedback signal that is used to control a hydraulic actuator that controls the position of the upper roll (col. 2, lines 54-61). With respect to claims 9 and 10, Foster discloses stored information on the rate of part movement is used to control the rate between the positions of the feedback and command signals so that the desired contour or radii changes occur at the correct position of the tube being formed (col. 3, lines 25-32). Foster also teaches the automatic, numerical control of the upper roll's position (col. 3, lines 53-58). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined invention of Watanabe and Ruple and include the automatic and continuous sensor and control of the forming roll position of Foster in order to avoid manual control and enhance the overall productivity of the welded tubes of varying thickness (Foster, col. 3, lines 57-58).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel E. Beveridge whose telephone number is (571) 272-5169. The examiner can normally be reached on Monday through Friday, 9 am to 6 pm.

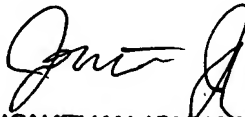
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax

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phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

REB



JONATHAN JOHNSON
PRIMARY EXAMINER